

**REMARKS**

Claims 1-14 are all the claims pending in the application.

***Information Disclosure Statement***

Applicants respectfully request the Examiner to initial the references cited in the Information Disclosure Statement filed on July 29, 2003, as previously requested by the Applicants in the Amendment filed on July 11, 2007.

***Statement of Substance of Interview***

On October 16, 2007, Applicants' representative spoke with the Examiner over telephone and submitted that the finality of the Office Action is premature, as set forth in further detail below (see 'Finality is premature' section). The Examiner appeared to agree with the Applicants' representative but indicated that he wanted a second opinion from his SPE before he committed to withdrawing the finality of the Office Action.

In addition, during the interview, Applicants' representative explained an exemplary embodiment of the invention to the Examiner, and the differences between the claimed invention and the prior art of record. The Examiner indicated that he would reconsider the current rejection and conduct a new search in view of our discussion, and asked the Applicants' representative to submit the points discussed during the interview as a response to the Office Action. Since these points are being submitted herewith (see 'Claim Rejections...' section below), Applicants respectfully submit that the application is in immediate condition for allowance as preliminarily agreed to by the Examiner subject to further consideration and/or search.

It is respectfully submitted that the instant STATEMENT OF SUBSTANCE OF INTERVIEW complies with the requirements of 37 C.F.R. §§1.2 and 1.133 and MPEP §713.04.

***Finality is premature***

Applicants respectfully submit that the finality of the current Office Action is premature. In the previous Amendment filed on July 11, 2007, there were no amendments to the claims that necessitated new grounds of rejection. It appears that the Examiner is relying on the amendment to claim 1 shown below (which was made in the previous Amendment) to support the finality of this Office Action:

“generating a plurality of block regions each having a predetermined number of pixels and having a smaller area than any one of the object regions by dividing ~~the image~~ each of the generated object regions”

Applicants respectfully submit that this amendment did not necessitate new grounds of rejection for claim 1. In the previous Office Action, claim 1 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 4,731,859 to Holter *et al.* in view of U.S. Patent No. 6,188,787 to Ohmae *et al.* Applicants argued in the previous Amendment that Holter *et al.* does not disclose or suggest “generating a plurality of block regions each having a **predetermined** number of pixels...” as set forth in claim 1. In the current Office Action, the Examiner indicates that he agreed with the Applicants’ arguments in the previous Amendment (*see* Office Action, page 2, line 7), and thus the previous rejection was withdrawn.

Applicants respectfully submit that regardless of whether the claimed plurality of block regions are generated by dividing the image (as set forth in original claim 1) **or** by dividing each of the generated object regions (as amended in the previous Amendment), it was pointed out in the previous Amendment that Holter *et al.* does not disclose or suggest that the claimed plurality of blocks have a **predetermined** number of pixels. That is, the arguments in the previous

Amendment were based upon the **predetermined** feature (e.g., previous Amendment, page 9, 1<sup>st</sup>-3<sup>rd</sup> paragraphs).

Since there was no amendment to claim 1 with respect to the claimed feature of the plurality of the block regions having the **predetermined** number of pixels, Applicants respectfully submit that the finality of the current Office Action is premature. Therefore, Applicants respectfully request the Examiner to withdraw the finality of the Office Action.

***Requesting updated PTO-892 form***

In addition, the newly cited reference (U.S. Patent No. 5,995,668 to Corset *et al.*) relied upon to reject independent claims 1 and 3 has not been cited on the 'Notice of References Cited' form in the Office Action. Accordingly, Applicants respectfully request the Examiner to cite the Corset reference on the PTO-892 form.

***Allowable subject matter***

Applicants thank the Examiner for maintaining that claims 2 and 7-10 would be allowable if rewritten in independent form. However, Applicants respectfully request the Examiner to hold in abeyance such rewriting of these claims until the Examiner has had an opportunity to reconsider and withdraw the rejection of the other claims in view of the arguments presented below.

***Claim Rejections – 35 U.S.C. § 103***

Claims 1 and 3 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,995,668 to Corset *et al.* ("Corset") in view of U.S. Patent No. 6,188,787 to Ohmae *et al.* ("Ohmae").

Claims 4 and 6 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corset in view of Ohmae, and further in view of U.S. Patent No. 4,731,859 to Holter *et al* (“Holter”).

Claim 5 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corset, Ohmae, and Holter and further in view of U.S. Patent No. 6,418,238 to Shiratani *et al*. (“Shiratani”).

Claims 11 and 12 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corset and Ohmae and further in view of U.S. Patent No. 7,039,232 to Nagarajan *et al*. (“Nagarajan”).

Claims 13 and 14 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corset and Ohmae and further in view of U.S. Patent No. 6,603,877 to Bishop.

For *at least* the following reasons, Applicants respectfully traverse the rejection.

Claim 1

Applicants respectfully submit that claim 1 is patentable over the cited references. For example, claim 1 relates to an image processing method. The image processing method comprises, *inter alia*, generating object regions by dividing an image into objects, and generating a plurality of block regions each having a **predetermined** number of pixels and having a smaller area than any one of the object regions by dividing each of the generated object regions, and totaling up occurrence frequency of **each of the types of the respective block regions in each of the object regions**.

The Examiner contends that FIG. 6 and col. 3, lines 1-3 of Corset disclose the claimed generating of the object regions and the generating of the plurality of the blocked regions. The Examiner acknowledges that Corset does not disclose the claimed totaling up of occurrence

frequency. However, the Examiner relies on Ohmae, specifically col. 2, lines 52-55 of Ohmae, to disclose this feature. Applicants respectfully submit that Corset and Ohmae, alone or in combination, do not disclose the above-noted features of claim 1.

For example, Corset does not disclose generating a plurality of block regions each having a **predetermined** number of pixels. The Examiner alleges that in FIG. 6 of Corset, the two regions in the second tier of the partition tree (PT) correspond to the claimed object regions, and the four regions in the middle tier of the PT block correspond to the claimed block regions (Office Action, page 2). Applicants respectfully submit that the four regions in the middle tier of the PT block do not disclose or suggest the claimed block regions.

Corset discloses that the PT is created in a partition topology definition sub-step. The partition topology definition sub-step includes the **determination** of additional partitions (e.g., the middle tier) **on the basis of motion and texture criteria** (e.g., *see* Corset, col. 1, lines 58-63, col. 8, lines 13-25, and col. 9, lines 26-41). That is, the middle tier of the PT, allegedly the claimed block regions, **does not and cannot** have a **predetermined** number of pixels, since it is based on the subject image's motion and texture. Ohmae's device would not know how to divide the image into additional partitions (resulting in the middle tier) without **determining** the subject image's motion and texture characteristics. Thus the additional partitions do not have a **predetermined** number of pixels. On the other hand, claim 1 recites that the claimed block regions have a **predetermined** number of pixels.

Therefore, Corset does not disclose or suggest generating a plurality of block regions each having a **predetermined** number of pixels as recited in claim 1.

Furthermore, Ohmae does not disclose or suggest totaling up occurrence frequency of **each of the types of the respective block regions in each of the object regions** as set forth in

claim 1. Ohmae is directed to an image recognition method and device which reliably detects all nonreproducible documents and whose detection capabilities are not compromised by tampering (Ohmae, col. 2, lines 8-13). In Ohmae, the presence of a given mark, which is the target item to be detected among image data under examination, is recognized. Ohmae states that a feature count is extracted from the reference pattern (of the given mark) and the image data for purposes of image recognition. The Examiner relies on this “feature count” to disclose the claimed totaling up occurrence frequency of each of the types of the respective block regions in each of the object regions.

The feature count is explained with reference to FIGS. 11-14 of Ohmae. Ohmae discloses that a counter C calculates **the number of black pixels in each of the four 6x6 pixel areas** (Areas 1-4) shown in FIG. 11. The number of black pixels is equivalent to the feature count in Ohmae (Ohmae, col. 8, lines 52-58). However, an occurrence frequency of **each of the colors of the pixels** in the four 6x6 pixel areas is not totaled in Ohmae. **Only** the black pixels are accounted for. As such, Ohmae does not explicitly disclose or implicitly suggest totaling up occurrence frequency of **each of the types of the respective block regions in each of the object regions**.

In light of the discussion above, Applicants respectfully submit that claim 1 is patentable over any conceivable combination of Corset and Ohmae. Accordingly, Applicants request the Examiner to withdraw the 35 U.S.C. § 103(a) rejection of claim 1.

### Claim 3

Claim 3 recites features similar to those discussed above with respect to claim 1. For example, claim 3 recites an image processing apparatus comprising, *inter alia*, object region extraction means for generating object regions by dividing an image into objects, block region

generation means for generating block regions each having a **predetermined** number of pixels and having a smaller area than any one of the object regions, by dividing each of the generated object regions, object recognition means for recognizing the type of each of the objects by **totaling up occurrence frequency of each of the types of the block regions in each of the object regions**. As such, Applicants submit to the Examiner that claim 3 is patentable for *at least* reasons similar to, but not coextensive with, those given above with respect to claim 3.

Claims 4 and 6

Claims 4 and 6 depend from claim 3. Since Holter does not cure the deficient teachings of Corset and Ohmae with respect to claim 3, Applicants respectfully submit that claims 4 and 6 are patentable *at least* by virtue of their dependency.

Claim 5

Claim 5 depends from claim 3. Since Shiratani does not cure the deficient teachings of Corset, Ohmae, and Holter with respect to claim 3, Applicants respectfully submit that claim 5 is patentable *at least* by virtue of its dependency.

Claims 11-12

Claims 11-12 depend from claim 1 and 3. Since Nagarajan does not cure the deficient teachings of Corset and Ohmae with respect to claims 1 and 3, Applicants respectfully submit that claims 11 and 12 are patentable *at least* by virtue of their dependency.

Claims 13-14

Claims 13-14 depend from claim 1 and 3. Since Bishop does not cure the deficient teachings of Corset and Ohmae with respect to claims 1 and 3, Applicants respectfully submit that claims 13 and 14 are patentable *at least* by virtue of their dependency.

***Conclusion***

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

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